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## NOTICE OF ALLOWANCE AND FEE(S) DUE

54004 7590 03/08/2010

MUIRHEAD AND SATURNELLI, LLC  
200 FRIBERG PARKWAY  
SUITE 1001  
WESTBOROUGH, MA 01581

EXAMINER

COSIMANO, EDWARD R

ART UNIT

PAPER NUMBER

2863

DATE MAILED: 03/08/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/590,164

03/26/2007

Martin Donath

WEM-082US

4126

TITLE OF INVENTION: DETERMINATION OF THE CONNECTED HEATING LOAD OF A BUILDING

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	06/08/2010

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

### HOW TO REPLY TO THIS NOTICE:

#### I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE  
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**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

54004 7590 03/08/2010

**MUIRHEAD AND SATURNELLI, LLC**  
200 FRIBERG PARKWAY  
SUITE 1001  
WESTBOROUGH, MA 01581

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,164	03/26/2007	Martin Donath	WEM-082US	4126

TITLE OF INVENTION: DETERMINATION OF THE CONNECTED HEATING LOAD OF A BUILDING

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	06/08/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
COSIMANO, EDWARD R	2863	702-182000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_
- 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,164	03/26/2007	Martin Donath	WEM-082US	4126
54004	7590	03/08/2010	EXAMINER	
MUIRHEAD AND SATURNELLI, LLC 200 FRIBERG PARKWAY SUITE 1001 WESTBOROUGH, MA 01581			COSIMANO, EDWARD R	
			ART UNIT	PAPER NUMBER
			2863	
DATE MAILED: 03/08/2010				

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 492 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 492 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/590,164	DONATH ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Edward R. Cosimano	2863	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 16 November 2009.
2. ☒ The allowed claim(s) is/are 1-51.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br/>Paper No./Mail Date <u>11/16/2007</u></li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____.</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____.</li> </ol> |
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1. EXAMINER'S COMMENT

1.1 When preparing this Office action the examiner considers the instant application to include:

A) the Oath/Declaration filed on 26 March 2007 which is acceptable to the examiner;

B) the Abstract filed on 81 August 2006 (from WO 2005/085784 A1 publication of PCT/EP2005/001397) which is acceptable to the examiner;

C) figures 1, 2 & 3 of the set of drawings containing 2 sheets of 3 figures comprising figures 1 & 2 as presented in the set of drawings filed on 21 August 2006 and figure 3 as presented in the set of drawings filed on 16 November 2009 where the content of figures 1, 2 & 3 of the above set of drawings is acceptable to the examiner;

D) the written description as filed on 21 August 2006 and amended on 21 August 2006 and amended on 16 November 2009; and

E) the amended set of claims as filed on 21 August 2006.

1.2 Applicant's claim for the benefit of an earlier filing date pursuant to 35 U.S.C. 120, 35 U.S.C. 365(c) and 35 U.S.C. 371 are acknowledged.

1.3 The examiner has considered the prior art cited in the base applications.

1.4 Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

1.5 The examiner has approved the proposed changes to figure 3 of the drawings as filed on 16 November 2009.

2. REASONS FOR ALLOWANCE

2.1 The following is a statement of reasons for the indication of allowable subject matter:

A) the prior art, for example:

(1) either Spitzglass (1,730,541) or Germer (2,252,367 or 2,252,369) or Weisser et al (4,355,908) or Nethery (4,362,499) or Shriver et al (4,749,122) disclose a machine/process that provides the useful and beneficial function of determining the efficiency or performance of a heating machine/process by measuring or sensing or determining or monitoring flue or exhaust gas content and combustion conditions, for example the amount of fuel supplied to the

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combustion process as well as the heat supplied by the heating machine/process. The measured data/information is then processed in order to determine the efficiency or performance of the heating machine/process based on the difference in the heat loss, that is the theoretical heat minus the heat of the flue/exhaust gases, divided by the theoretical heat that may be produced by combustion. Where in either Spitzglass (1,730,541) or Weisser et al (4,355,908) or Nethery (4,362,499) or Shriver et al (4,749,122) the results of the determination of the efficiency or performance of the heating machine/process is used in order to control the operation of the heating machine/process

(2) either Anderson (2,883,255) or Schlein (3,202,804) disclose a machine/process that provides the useful and beneficial function of a monitoring and alarm/warning machine/process in which the operation of a machine/process is characterized by using a sufficient number of one or more sensors in order to monitor or sense or measure each of the one or more operating characteristics or parameters of the monitored machine/process. The data/information from each of the one or more sensors is then communicated over a suitable communications link to a central monitoring station or location. At the central monitoring station or location, the received sensor data/information from each of the one or more monitoring sensors is compared to one or more corresponding thresholds that represent the normal or desired operating value for the corresponding measured or sensed operating characteristic or parameter of the monitored machine/process. When this comparison results in an indication that one or more of the sensed or monitored or measured operating characteristics or parameters of the monitored machine/process has deviated or varied from the corresponding threshold that represents the normal or desired operating value for the corresponding measured or sensed operating characteristic or parameter of the monitored machine/process, then the user/operator of the central monitoring station or location is provided with a suitable and readily recognizable alarm or warning or indication of each of the one or more sensed or monitored or measured operating characteristics or parameters on the monitored machine/process that has deviated from the normal

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or desired operating value for the corresponding operating characteristic or parameter of then monitored machine/process. Where (2a) in Anderson (2,883,255) the central monitoring station or location is remote from the monitored machine/process, and (2b) in Schlein (3,202,804) the thresholds for the sensed or monitored or measured operating characteristics or parameters are set by using adjustable user/operator inputs.

(3) either Bergman (DE 27 53 485 A1) or GB 1 562 536) disclose a machine/process that provides the useful and beneficial function of determining the efficiency or performance of a heating machine/process by measuring or sensing or determining or monitoring: (3a) waste gas content, for example amount of CO<sub>2</sub>, O<sub>2</sub>, etc., (3b) waste gas temperature, (3c) intake air temperature, (3d) combustion conditions, for example the combustion temperature, the amount of CO<sub>2</sub>, O<sub>2</sub>, etc. supplied to the point of combustion, and (3e) the heat supplied to the heating machine/process and then processing the measured/sensed or determined/monitored data/information in order to determine the efficiency or performance of the heating machine/process based on the difference in the heat loss, that is theoretical heat minus the heat of the flue/exhaust gases, divided by the theoretical heat that may be produced by combustion.

(4) Alt et al (4,621,528) discloses a machine/process that provides the useful and beneficial function of determining the required size of a replacement machine/process by measuring or sensing or determining or monitoring: (4a) amount of time that the current machine/process operated during a period of time and (4b) the peak demand of the machine/process during the period of time and then processing the measured/sensed or determined/monitored data/information in order to determine the efficiency or performance of the machine/process during the period of time. Then the determined performance of the machine/process in combination with the peak demand of the machine/process and the operating time of the machine/process are used in order to determine the size of the replacement machine/process that will meet the required performance, peak demand, and

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operating time requirements of the intended use of the replacement machine/process.

(5) either Amrhein et al (DE 3626281 A1) or Schneider (DE 3730529) disclose a machine/process that provides the useful and beneficial function of determining the efficiency or performance of a machine/process by measuring or sensing or determining or monitoring amount of time that the current machine/process operated during a period of time. The determined operating time is then divided by the duration of the monitoring period in order to determine the efficiency or performance of the machine/process during the monitoring period.

(6) either Kopetzky et al (DE 10030294 A1) or Freihofer et al (DE 100 30 294 A1) disclose a machine/process that provides the useful and beneficial function of determining the energy consumption of a building/structure or machine/process by measuring or sensing or determining or monitoring amount of energy that is actually consumed by the building/structure or machine/process operated during a period of time. The determined energy consumption is then divided by a determined/calculated theoretical amount of energy consumption that should be consumed by the building/structure or machine/process in order to determine the efficiency or performance of the building/structure or machine/process during the monitoring period.

(7) Brauns (DE 100 57 834 A1) discloses a machine/process that provides the useful and beneficial function of controlling the operation of a heating machine/process by measuring or sensing or determining or monitoring: (1) outside temperature and (2) inside temperature in order to use a determined difference in temperatures in order to determine a control value that is used in order to control the operation of the heating machine/process.

B) however, the prior art does not fairly teach or suggest in regard to claim 1 a process in claim 1 that provides the useful and beneficial function of determining the demand or load or utilization of a heating machine/process being used to heat an environment during a measuring period or interval or window by providing actions in claim 1 that perform at least the functions of:



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(1) determining or measuring for each time interval/period during the measuring period or interval or window each of: (1a) the fuel power, (1b) the interior temperature of the environment being heated, and (1c) the combustion air temperature;

(2) sensing or measuring for each time interval/period during the measuring period or interval or window each of: (2a) waste gas concentration, (2b) waste gas temperature, and (2c) the temperature of the exterior of the environment being heated;

(3) determining or calculating the efficiency or performance of the heating machine/process for each time interval/period during the measuring period or interval or window from: (3a) the measured waste gas concentration, (2b) the measured waste gas temperature, and (3c) the determined combustion air temperature;

(4) determining for the measuring period or interval or window both: (4a) the average interior or inside temperature of the environment being heated from the monitored interior or inside temperature of the environment being heated and (4b) the average exterior or outside temperature for the environment being heated from the monitored the exterior or outside temperature of the environment being heated;

(5) determining or calculating the average efficiency or performance of the heating machine/process at a determined average exterior or outside temperature for the measuring period or interval or window from: (5a) the determined fuel power, and (5b) the determined or calculated efficiency or performance of the heating machine/process during the measuring period or interval or window;

(6) determining or calculating maximum efficiency or performance of the heating machine/process at a determined minimum exterior or outside temperature for the measuring period or interval or window the from: (6a) the determined average efficiency or performance of the heating machine/process during the measuring period or interval or window, (6b) the determined minimum exterior or outside temperature for the measuring period or interval or window,

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and (6c) the determined average interior or inside temperature for the measuring period or interval or window; and

(7) determining or calculating the heating load connected to the heating machine/process for the measuring period or interval or window the from: (7a) the determined maximum efficiency or performance of the heating machine/process for the measuring period or interval or window, and (7c) the duration of the measuring period or interval or window.

Claims 2-41 & 50, which depend from claim 1, are allowable over the prior art for the same reason.

C) however, the prior art does not fairly teach or suggest in regard to claim 42 a machine in claim 42, that provides the useful and beneficial function of determining the demand or load or utilization of a heating machine/process being used to heat an environment during a measuring period or interval or window by providing structures in claim 42 that perform at least the functions of:

(1) determining or measuring for each time interval/period during the measuring period or interval or window each of: (1a) the fuel power, (1b) the interior temperature of the environment being heated, and (1c) the combustion air temperature;

(2) sensing or measuring for each time interval/period during the measuring period or interval or window each of: (2a) waste gas concentration, (2b) waste gas temperature, and (2c) the temperature of the exterior of the environment being heated;

(3) determining or calculating the efficiency or performance of the heating machine/process for each time interval/period during the measuring period or interval or window from: (3a) the measured waste gas concentration, (2b) the measured waste gas temperature, and (3c) the determined combustion air temperature;

(4) determining for the measuring period or interval or window the average exterior or outside temperature for the environment being heated from the monitored the exterior or outside temperature of the environment being heated;

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(5) determining or calculating the average efficiency or performance of the heating machine/process at a determined average exterior or outside temperature for the measuring period or interval or window from: (5a) the determined fuel power, and (5b) the determined or calculated efficiency or performance of the heating machine/process during the measuring period or interval or window;

(6) determining or calculating maximum efficiency or performance of the heating machine/process at a determined minimum exterior or outside temperature for the measuring period or interval or window the from: (6a) the determined average efficiency or performance of the heating machine/process during the measuring period or interval or window, (6b) the determined minimum exterior or outside temperature for the measuring period or interval or window, (6c) the determined average interior or inside temperature for the measuring period or interval or window, and (6d) a determined average exterior or outside temperature for the measuring period or interval or window; and

(7) determining or calculating the heating load connected to the heating machine/process for the measuring period or interval or window the from: (7a) the determined maximum efficiency or performance of the heating machine/process for the measuring period or interval or window, and (7c) the duration of the measuring period or interval or window.

Claims 43-48 & 51, which depend from claim 42, are allowable over the prior art for the same reason.

D) however, the prior art does not fairly teach or suggest in regard to claim 49 a process in claim 49, that provides the useful and beneficial function of determining the demand or load or utilization of a heating machine/process being used to heat an environment during a measuring period or interval or window by providing actions in claim 49 that perform at least the functions of:

(1) determining or measuring for each time interval/period during the measuring period or interval or window each of: (1a) the fuel power, and (1b) the combustion air temperature;

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(2) sensing or measuring for each time interval/period during the measuring period or interval or window each of: (2a) waste gas concentration, and (2b) waste gas temperature; and

(3) determining or calculating the efficiency or performance of the heating machine/process for each time interval/period during the measuring period or interval or window from: (3a) the measured waste gas concentration, (2b) the measured waste gas temperature, and (3c) the determined combustion air temperature.

3. CONCLUSION

3.1 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward R. Cosimano whose telephone number is 571-272-0571. The examiner can normally be reached on 571-272-0571 from 7:30am to 4:00pm (Eastern Time).

3.2 If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn, can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

3.3 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ERC  
03/01/2010

**/Edward Cosimano/  
Primary Examiner Unit 2863**